

NOTES ON CERATOPOGONINAE (DIPTERA).

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Taxonomists interested in the Chironomidae have never been certain as to what the genus *Ceratopogon* actually represented. Edwards (1) (Ann. and Mag. Nat. Hist., Ser. 9, Vol. VI: 127, 1920) has outlined the various concepts held by investigators in this field. Through inquiry Edwards established the fact that Meigen's type *C. communis* possessed affinities with both *Atrichopogon* and *Stilobezzia*. He later informed me that a personal examination demonstrated that a microscopical pubescence was present on the eyes, and therefore *Psilohelca* Kieffer was synonymous with *Ceratopogon*. Among a number of *Ceratopogoninae* sent me by Dr. Felt of Albany, New York, was included a series, the characters of whose members coincided in the main with descriptions of Edwards (1), Winnertz (2), Kieffer (3) and Goetghebuer (4), the species concerned having been placed under *Ceratopogon* (*Psilohelca*). Since no American *ceratopogonine* has as yet been definitely classed as a species of *Ceratopogon* as limited by Edwards and the above-mentioned workers, this form, apparently new, is described in order that it may serve as a basis for comparison.

***Ceratopogon culicoidithorax*, new species.**

Length of body (dry specimen) approximately 2 mm.; length of wing 1.32 mm.; width of wing .69 mm.

Occiput black, surface dull, covered with a fine gray pruinescence; frons hour glass shaped, decidedly narrowed between the bases of the antennae; clypeus slightly shiny, proboscis much more so, and slightly shorter. Palpi five segmented, the apical one longest, third proportionately shorter than in *Culicoides* and *Leptoconops*. The distance between the inner margins of the eyes is about one-seventh the head width. The antennae are short, dark yellowish brown, segments four to ten inclusive approximately spherical, the apical five becoming progressively longer, though the length of the terminal member does not exceed its width by more than a third. Surface of thorax brownish black, shiny, with fine grayish pruinescence; hairs few in number, black and coarse, restricted chiefly to the areas near the wing bases and the margins of the prescutellar depression. Ovale sensory organs on the fore part of the mesonotum are a prominent feature as with *Culicoides*, though possibly more shallow. Surface of scutellum and metanotum similar to that of mesonotum, the former with two pairs of coarse black hairs, one median, the other lateral, also several minute ones, all arranged in a transverse row. Greater portion of haltere pale except the light brown base. Legs well developed, tibiae especially so, of a medium brown shade, tarsi lighter; the tibiae tend to be more heavily clothed with long coarse hairs; the second and third

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tibiae lack spines, the first terminated by a spur; the last has the usual apical row of spinulae; metatarsus not quite equal to combined length of following two segments, fourth very small, obcordate; metatarsus with four pairs of small spines ventrally, first two of these heavier, second segment with a terminal pair, posterior metatarsus with a number of ventral spinulae; claws dark, strong, almost as long as fifth tarsal segment, each with an inconspicuous tooth about midway from the base; an extremely minute empodium may be seen under favorable conditions. Wing practically devoid of macrotrichiae; veins R_{1+2+3} and R_{4+5} (first and second longitudinal) are exceptionally well developed, rising above the surface; radial cells approximately equal in length, the second considerably wider, its distal end not quite attaining a point two-thirds of the wing length from the base; Cu forks directly below the median end of the radio-median crossvein. Abdomen dull brown, with few brown hairs, chiefly situated laterally.

Male similar to the female except in regard to the usual secondary sexual characters; in the female the radial cells are practically contiguous while in the male they are separated by a distance almost equal to the length of each, this result apparently having been brought about by coalescence of the radial veins in the apical portion of the first cell and the basal part of the second; these cells are therefore shorter than the same structures in the female. The claw of the male is shorter and lacks the median tooth.

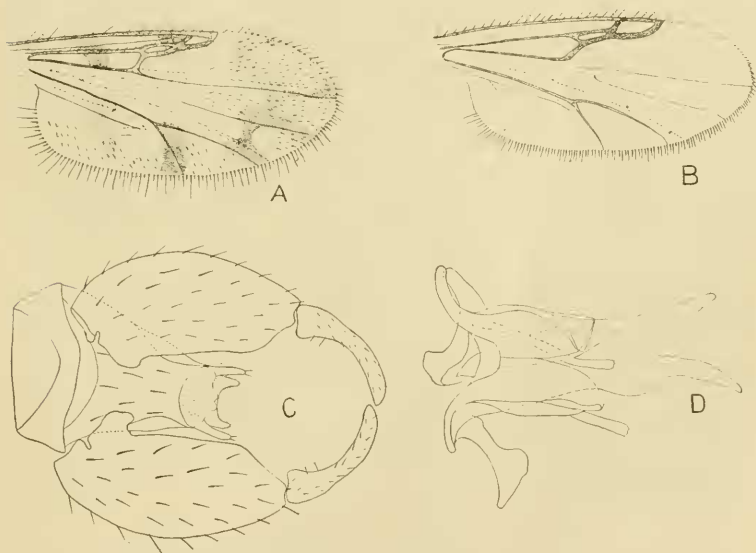


Fig. A. *Culicoides mississippiensis*. Wing.

Fig. B. *Ceratopogon culicoidithorax*. Wing.

Fig. C. *Ceratopogon culicoidithorax*. Male hypopygium; side pieces, claspers, and ninth tergite: ventral view.

Fig. D. *C. culicoidithorax*. Male hypopygium, harpes and aedeagus: ventral view.

Karner, N. Y., May 14, 1906. Eight cotypes, 6 ♀ ♀. 1 ♂ in the New York State Museum at Albany, 1 ♀ in the U. S. National Museum. Cat. No. 29423.

The presence of prominent sensory thoracic organs suggests that *Ceratopogon* may be closely allied to *Culicoides*, while the radial cells markedly resemble those of *Stilobezzia*. The larva of *Stilobezzia coquilleti* Kief (*picta* Coq.) can not be distinguished from *Culicoides*, at least under the lower powers of a binocular. The larva of this species, however, is quiescent, while those species of *Culicoides* in which the larvae have an aquatic existence, move in an active vibratory manner.

Culicoides mississippiensis, new species.

Length (dry specimen) approximately 1.5 mm.; length of wing 1.4 mm.; width of wing .62 mm.

Frons, clypeus and antennae light brown, palpi darker, third segment long gradually widening up to three-fourths its length; proboscis blackish brown, shiny; fourth segment of antennae slightly shorter than fifth; occiput brown, densely covered with gray pruinescence, with a number of short brown hairs. Inner margins of eyes almost contiguous at vertex. Thorax brown, densely covered with gray pruinescence, with a number of short hairs,—those in and bounding the prescutellar depression and at the wing bases considerably longer. Sensory organs crescent shaped, inner end wider. Scutellum similar to mesonotum except for a darker median patch. Stem of haltere yellowish, button chiefly brown. Legs long, yellowish brown, first tarsal segment more than twice the length of second. Wings white, with a tendency toward the formation of three brownish bands, the first midway between the radio-median crossvein and the base, disappearing at vein M, visible again below Cu, then gradually becoming fainter. The second crosses the middle of the wing in a similar manner; the third begins beyond the second radial cell, irregularly across the wing, giving off branches to the tip along veins M1, M2 and the first branch of Cu and along the anterior margin. These surround three large apical white spots. Microtrichiae occur on the distal half and the anal portion. Abdomen dull brown, covered with fine gray pruinescence, with a few long hairs; the second to seventh segments inclusive are lighter along the posterior margin. The sensory organs in these segments are very prominent; they consist of a basal anterior pair widely separated and a posterior pair located medially.

Pass Christian, Miss., April, 1925 (Mrs. J. Michels): "troublesome." Eight female cotypes in the collection of the U. S. National Museum. Cat. No. 29206.

Attention is called to a typographical error occurring in the synoptic key of the American species of *Culicoides* (Amer. Journ. Hygiene, 5:278, 1925). The first portion of couplet 16

should refer to *C. stellifer*, the second to couplet 17 instead of the reverse. Since the appearance of this paper some additional distributional records have been obtained. *C. venustus* Hoff. known heretofore only from Baltimore was taken at Nassau, N. Y., June 22, 1907. A specimen of *C. stellifer* Coq. from Speculator, June 8, 1911, also represents a new record from New York. Occurrence of an individual of *C. melleus* Coq. collected with the type series of *C. mississippiensis* at Pass Christian, Miss., indicates that like *C. furens* Poey this form is apparently restricted to coasts and inlets. Other localities for this species are Lake Worth, Florida (type), and South River, Maryland, June 2, 1923.

LITERATURE CITED.

- (1) EDWARDS, H. F.—On the Use of the Generic Name *Ceratopogon*, Meigen. Ann. & Mag. Nat. Hist. Ser. 9, VI; 127-130. 1920.
- (2) WINNERTZ.—Linnaea Ent., 6:57. 1851.
- (3) KIEFFER, J. J.—Chironomides d'Europe. Ann. Mus. Nat. Hung., 17:66-69. 1919.
- (4) GAETGHEBUER, M.—Ceratopogoninae de Belgique. Mem. du Mus. Royal d'Hist. Nat. de Belgique VIII, Fasc 3, 66-69. 1920.

THE APHIDS OF MYZOCALLIS INFESTING THE BAMBOO.

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At present seven species of *Myzocallis* are known to occur on the bamboo (*Bambusa*, *Arundinaria*, *Dendrocalamus* and *Sasa*).

Myzocallis arundinariae Essig.

Univ. Calif. Publ. Entom., 1, p. 302 (1917).

Host.—*Bambusa*, *Arundinaria*.

Distribution.—Japan, North America.

Myzocallis arundicolens Clarke.

Canad. Entom., xxxv, p. 249 (1903).

Synonym.—*Takeecallis bambusae* Matsumura, Jl. Coll. Agr. Sapporo, vii, p. 373 (1917).

Host.—*Bambusa*, *Arundinaria*, *Sasa*.

Distribution.—Japan, North America, England.

Myzocallis bambusifoliae Takah.

Aphididae of Formosa, part 1, p. 73 (1921), part 2, p. 123, pl. II, B, fig. 6 (1923) and part 3, p. 63 (1924).